

INFORMATION

AGENDA ITEM: Telecommunications Infrastructure

The Library of California Act includes provisions for telecommunications services to support Californians, their libraries, and the various programs of the Act in Sections 18842, for Regional Library Networks, and 18850, in Statewide Services. Initial funding for these programs is called for in SEC.2.: "The sum of \$5,000,000 is hereby appropriated from the General Fund to the Library of California Board for the purpose of funding the startup phase of the Library of California...to pay the costs of... (a) Telecommunications infrastructure to support up to 1,000 libraries, including, but not limited to, the costs of linking systems and installing regional servers."

GENERAL OVERALL PROGRAM UPDATES:

CURRENT STATUS: A strong focus of the Library of California is the development and support of a telecommunications network to enable all libraries to share their resources with each other. Z39.50 is a protocol that allows for the searching of one or more library online catalogs over the Internet, regardless of the proprietary software and hardware on each local computer system. The Board's decision to continue and expand the Z39.50 server software support and server access programs is facilitating the development of a network of virtual library catalogs for access by California library users. It is critical that this network be developed and maintained to establish a statewide database that reflects the most current holdings of California's libraries and to support sharing of resources for all Californians.

At its February 1999 meeting the Board directed its Chief Executive Officer to implement a Z39.50 server software reimbursement program for libraries who meet the interim eligibility requirements for participation in the Library of California and technical requirements that promote open access to library catalogs via Z39.50 and the Internet. Other specifications used to screen or prioritize applicants may include participation in multitype resource sharing through an affiliation with a CLSA Cooperative Library System; or through participation in the CLSA Interlibrary Loan reimbursement program; or by type of library and geographic distribution. A maximum of 100 grants may be awarded at \$7,500 each for a total of \$750,000 from Library of California funds. Grants will be made available in multiple cycles, extending into FY 1999/2000, until funds are exhausted.

In response to the February directions staff prepared and distributed application materials, with an initial deadline of April 30. Twenty-five applications were

received in the first cycle, representing libraries of all types from throughout California.

In July staff released materials for a second cycle of grants ending September 24, 1999 (Exhibit A). The reason for this extended period is that the schools are on vacation for most of the summer and it is hoped that some will be able to apply when they return in August/September. The three-month "window" also accommodates libraries that said they might be interested in applying in the first cycle, but would be unable to because of the short time-line.

Letters announcing the availability of the grants were sent to 1,500 multitype libraries identified in the ALA Library Directory. The announcement was also posted to multiple electronic mail lists used by all types of libraries throughout California.

RELATED ISSUES TO COME BEFORE THE BOARD IN THE FUTURE:

Z39.50 Study

The State Library has funded an LSTA grant to the Mountain-Valley Library System to contract with Joan Frye Williams for a follow-up study of Z39.50 projects and issues. In her *Study of Linked Systems with Recommendations for the Future of the CLSA Statewide Data Base*, California State Library, April 17, 1998, Ms. Williams stated that "...the technology needed to link local library systems for resource sharing purposes is available today. The Linked Systems Projects funded by the California Library Services Board have proved the concept -- it is now possible for users to interact directly with remote library catalogs, to search and retrieve needed information, and in some cases to go beyond searching to send interlibrary loan requests or place a hold on desired material. The "virtual catalog" is no longer a theoretical possibility"

The California State Library and the Library of California Board have assisted the development of Z39.50 linked systems under a variety of funding programs -- CLSA, LoC, LSCA, and LSTA. Over time, most of these projects have achieved an operational level that allows for some staff and public searching. The deployment of gateway servers has demonstrated that virtual catalogs under Z39.50 can be developed and implemented. However, the deployment has identified several problems that need to be addressed to achieve the best searching results from both servers and clients.

In June 1999 several representatives from several Northern California Z39.50 projects met with State Library staff in Oakland to discuss issues related to their implementation of Z39.50. They identified the following problems:

- Results of Z39.50 searches were not consistent or equivalent when compared to searches using the local system online catalogs. Discrepancies between Z39.50 searching and local system searching of the same database(s) were significant.
- It was difficult or impossible to retrieve holdings and item level information from some Z39.50 servers.
- It was not possible in some cases to distinguish the separate holdings of jurisdictions that share a Z39.50 server.
- Vendors are not providing the detailed information needed to streamline configuration of cross-platform connections. Implementers spend large amounts of time trying to guess the proper combinations.
- Incompatibilities result from differences in local database indexing. The inclusion or exclusion of MARC fields in the indexing (e.g., author, title, subject) directly affects the search results.
- Some public services staff were not comfortable with any new approach that seems less than perfect.
- Some libraries have expressed the concern that the additional workload resulting from remote Z39.50 queries will degrade local system performance for their primary clientele.

It is important to note that the significance of these problems and issues varies among the various projects. The ability to connect and to derive meaningful results appears to relate more to the way the software is installed and configured than to the overall Z39.50 standard. Z39.50 was designed to allow for many different configurations, or implementations. It is the flexibility built into the standard that in some cases leads to inconsistent implementation.

The problems encountered in California are typical of Z39.50 problems encountered elsewhere. In many ways this situation is analogous to the early days of the MARC bibliographic standard when it took a considerable amount of time to develop the best practices for implementing the standard to achieve consistent and high quality results.

This project will extend Ms Williams' consulting agreement with the Mountain-Valley Library System to develop policy issues, investigate implementation issues, and make recommendations to the Library of California Board (LCB).

Consulting study tasks include the following:

- Identify Z39.50 problem areas, and possible solutions
- Develop additional recommendations as to how the Library of California Board and the State Library might provide additional support for Z39.50 implementation.
- Identify additional products and services that might be incorporated into the Z39.50 infrastructure program.
- Identify and recommend options for the development of regional and statewide access and resource sharing using Z39.50 connectivity as the access medium.

- Review of strategic goals, policy issues, and recommendations

Adoption of specifications and performance measures for Library of California telecommunications, access, and electronic resource sharing programs.

These are part of the regulations currently under consideration. Following the adoption of the regulations, staff will propose options for Board consideration regarding specifications and performance measures for the Library of California

RELATED ACTIVITIES OUTSIDE THE LIBRARY OF CALIFORNIA

- High-Speed Rural Telecommunications

State Library staff has continued to monitor the Gates Center for Technology Access (GCTA) as they study the high-speed telecommunications needs of California public libraries. While this work is targeted to public libraries, the findings will be applicable to all types of libraries. In June Dr. Starr convened a meeting of high-level agency heads and departmental representatives to discuss how the state might facilitate the deployment of the Gates program. A preliminary GCTA map showing all California telecommunications providers overlaid with public library sites and levels of connectivity for each site was shown to this group. Representatives of the GLI will provide a summary of their findings to State Library staff for a presentation to the Library of California Board either in November or at its first meeting next calendar year.

- Gates Library Initiative Statewide Partnership Grants

Staff participated in the first cycle of pre-application workshops with the Gates Library Initiative during the week of July 11. This initial cycle targets Southern California library jurisdictions with service populations less than 100,000. The workshops were held in Burbank, Palm Springs, and Fresno. Attendance was good and participants came away very impressed with the level of planning and support evident in this program. Workshops for Northern California libraries and libraries throughout the state with greater than 100,000 service populations will be held in October.

Although the full partnership grants are available only to libraries with a service population that has a 10% or higher poverty level, library sites that do not meet that eligibility measure can elect to participate in a partial grant program. Under this latter program they can purchase computers at the "Gates price" and receive software, training and support.

State Library staff will provide support and logistics as requested by the GLI and will be directly involved in the grant application process for computer training laboratories.

Relevant Committee: Support Services
Staff Liaison: Mark Parker

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